

Appl. No. 09/456,105
Amdt. dated February 17, 2004
Reply to Office action of December 19, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 6 (canceled)

- 1 Claim 7 (previously presented): The computer controlled method of claim 18,
- 2 wherein the human-sensible information is a second image and the step of
- 3 producing further comprises presenting said second image on the output device.

Claims 8 - 12 (canceled)

- 1 Claim 13 (previously presented): The apparatus of claim 21, wherein the human-
- 2 sensible information is a second image associated with the visible object and the
- 3 output device is a lens apparatus that presents the second image.

Claims 14 (canceled)

- 1 Claim 15 (previously presented): The apparatus of claim 21, wherein the human-
- 2 sensible information is a second image associated with the visible object and the
- 3 output device is a display that presents the second image.

Claims 16 - 17 (canceled)

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1 Claim 18 (previously presented): A computer controlled method for operating on a
2 visible object included in an image disposed on a substrate to produce human-
3 sensible information associated with the visible object, the method comprising:
4 receiving image data indicating an image region of the image disposed on
5 the substrate; the image region including the visible object and further including
6 coded embedded data forming a uniform background for the visible object; the
7 coded embedded data indicating a location of the visible object in the image
8 disposed on the substrate;
9 decoding the coded embedded data to produce location data indicating the
10 location of the visible object in the image;
11 retrieving human-sensible information associated with the visible object
12 using the location data; and
13 producing the human-sensible information associated with the visible object
14 on an output device.

1 Claim 19 (previously presented): The computer-controlled method of claim 18
2 wherein the coded embedded data is a pattern of glyphs, and wherein the location
3 of the visible object in the image is encoded in the pattern of glyphs using rows of
4 interleaved and offset address codes.

1 Claim 20 (previously presented): The computer-controlled method of claim 19
2 wherein the coded embedded data further includes label data encoded within the
3 rows of interleaved and offset address codes; and wherein retrieving the human-
4 sensible information further includes using the label data to identify the human-
5 sensible information associated with the visible object.

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1 Claim 21 (previously presented): An apparatus for operating on a visible object
2 included in an image disposed on a substrate to produce human-sensible
3 information associated with the visible object, said apparatus comprising:
4 a frame grabber configured to receive image data indicating an image
5 region of the image disposed on the substrate; the image region including the
6 visible object and further including coded embedded data forming a uniform
7 background for the visible object; the coded embedded data indicating a location
8 of the visible object in the image disposed on the substrate;
9 a decoder configured to decode the coded embedded data to produce
10 location data indicating the location of the visible object in the image;
11 a data access mechanism configured to retrieve said human-sensible
12 information associated with the visible object using the location data; and
13 an output device configured to produce said human-sensible information
14 associated with the visible object.

1 Claim 22 (previously presented): The apparatus of claim 21 wherein the coded
2 embedded data is a pattern of glyphs and the location of the visible object in the
3 image is encoded using rows of interleaved and offset address codes, and
4 wherein the decoder produces the location data indicating the location of the
5 visible object in the image by extracting the location data from the rows of
6 interleaved and offset address codes.

1 Claim 23 (currently amended): ~~The computer-controlled method~~ apparatus of
2 claim 22 wherein the coded embedded data further includes label data encoded
3 within the rows of interleaved and offset address codes; and wherein the data
4 access mechanism uses the label data to identify the human-sensible information
5 associated with the visible object.

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- 1 Claim 24 (previously presented): A computer program product including a
2 computer readable medium having computer readable code embodied therein for
3 causing a computer to operate on a visible object included in an image disposed
4 on a substrate to produce human-sensible information associated with the visible
5 object, the computer program product comprising:
6 computer readable program code configured to cause said computer to
7 receive image data indicating an image region of the image disposed on the
8 substrate; the image region including the visible object and further including coded
9 embedded data forming a uniform background for the visible object; the coded
10 embedded data indicating a location of the visible object in the image disposed on
11 the substrate;
12 computer readable program code configured to cause said computer to
13 decode the coded embedded data to produce location data indicating the location
14 of the visible object in the image;
15 computer readable program code configured to cause said computer to
16 retrieve human-sensible information associated with the visible object using the
17 location data; and
18 computer readable program code configured to cause said computer to
19 produce the human-sensible information associated with the visible object on an
20 output device.